SPECIFICATIONS

Range	pH52	-2.0 to 16.0 pH
		-5.0 to 60.0°C / 23.0 to 140.0°F
	pH53	-2.00 to 16.00 pH
		-5.0 to 60.0°C / 23.0 to 140.0°F
Resolution	pH52	0.1 pH / 0.1°C / 0.1°F
	pH53	0.01 pH / 0.1°C / 0.1°F
Accuracy	pH52	±0.1 pH / ±1°C / ±2°F
(@20°C)	pH53	±0.02 pH / ±1°C / ±2°F
Typical EMC	pH52	±0.1 pH / ±0.2°C / ±0.4°F
Deviation	pH53	±0.03 pH / ±0.2°C / ±0.4°F

Temperature Compensation	Automatic
Calibration	Automatic, 1 or 2 points
pH electrode	**MA73047** (replaceable)
Environment	-5 to 60°C; 100% RH
Battery type	3 x 1.5V; IEC LR44, A76; alkaline
Battery life	approx. 200 hours
Auto-off	after 8 minutes
Dimensions	165 x 30 x 30 mm
Weight	80 g

ACCESSORIES

MA73047	Replaceable pH electrode with built-in temperature sensor
M10007B	pH 7.01 buffer solution, 25x20 mL sachet
M10004B	pH 4.01 buffer solution, 25x20 mL sachet
M10010B	pH 10.01 buffer solution, 25x20 mL sachet
M10000B	Electrode rinse solution, 25x20 mL sachet
MA9015	Electrode storage solution, 220 mL bottle
MA9016	Electrode cleaning solution, 220 mL bottle

WARRANTY:

This meter is warranted from all defects in materials and manufacturing **for a period of two years**. The **electrode is warranted for a period of one year.** During this period, the required repair or replacement of parts, where the damage is not due to negligence or erroneous operation by the user, will be effected free of charge.

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USER MANUAL

pH52 & pH53
Microprocessor Waterproof pH & temperature meters

These meters are in compliance with the CE directives.

OPERATIONAL GUIDE:

- Remove the cap and immerse the meter in **MA9015** storage solution for 2 hours to activate the electrode.
- Turn the meter on by pressing the ON/OFF key and select the measure range (pH, °C or °F) with the SET button.
- Immerse the electrode in the solution to be tested.
- Stir gently and wait for the reading to stabilize.
- *To freeze the display*, while in measurement mode, press and hold the SET button until the H tag lights up. The reading will be frozen on the LCD. Press the SET button again to return to normal mode.
- After use, rinse the electrode with water to minimize contamination and store it with a few drops of storage (**MA9015**) or pH7 (**M10007**) solution in the protective cap.
- Always turn the meter OFF and replace the protective cap after use.

NEVER USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

CALIBRATION:

- Enter the Calibration mode by pressing the CAL button. The pH tag will start blinking on the LCD.
- For a *single-point calibration*, place the electrode in any buffer, eg. pH 4.01, 7.01 or 10.01. The meter will automatically recognize and display the buffer value.
- When the pH tag stops blinking, press the SET button to confirm the calibration point.

Note: If the pH 7.01 buffer was used, press the SET button again to exit the Calibration mode; the first calibration point is stored and the meter returns to the measurements mode. Otherwise, if a different buffer was used, the meter will automatically return to normal mode.

- For a *two-point calibration*, place the electrode in pH 7.01 buffer. The meter will automatically recognize and display the buffer value.
- When the pH tag stops blinking, press the SET button to confirm and store the first calibration point.
- The meter will then ask for the second buffer. Place the electrode in pH 4.01 (or pH 10.01) buffer.
- When also this buffer is recognized, press the SET button to confirm and store the second calibration point; the meter will return to normal mode.

Note: If a solution with wrong pH value is used as buffer for calibration, the LCD will display the "Ec" message.

Note: *To exit the Calibration mode*, press the CAL button at any time. The meter will display dashes and then return to normal measurement mode.

Note: *To reset to the default values*, after entering the Calibration mode and before the first calibration point is confirmed (pH tag is blinking), press and hold the SET key, and then the CAL button.

Note: For better accuracy it is recommended to carry out a 2-point calibration procedure.

ELECTRODE REPLACEMENT:

- Remove the protective cap and unscrew the plastic ring on the top of the electrode.
- Pull out the **MA73047** pH electrode and replace it with a new one (aligning the colored pin towards the LCD side).
- Make sure the gaskets are in place before screwing back the ring.

BATTERY REPLACEMENT:

When the batteries become weak, the battery symbol on the LCD will light up.

When the low battery indicator appears only a few hours of battery life is remaining. It is recommended to replace the battery immediately.

The meter is also provided with BEPS (Battery Error Preventing System) which avoids any erroneous reading due to low battery level, by warning the user with the "Eb" message on the LCD.

To replace the batteries unscrew the battery compartment cap and replace all three 1.5V batteries while paying attention to their polarity. Make sure the gasket is in place before screwing back the cap.

Batteries should only be replaced in a nonhazardous area using the battery type specified in this instruction manual.